

NEW GENERA AND SPECIES OF ICHNEUMON-FLIES.

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This paper contains the descriptions of two new genera and eleven new species of Ichneumonidae together with notes on a few already described species.

Subfamily CRYPTINAE.

TRIBE HEMITELINI.

Genus CHRYSOPOCTONUS Cushman.

The following key should serve to distinguish the North American species of this genus including the new one described below:

- 1. Ferruginous, head black, abdomen sometimes piceous at apex.
atriceps (Ashmead)
- Otherwise colored _____ 2
- 2. Head ferruginous _____ bicolor, new species.
- Head black _____ 3
- 3. Hind coxae in male red (female unknown) _____ chrysopae (Ashmead)
- Hind coxae in male black _____ 4
- 4. Postpetiole in female polished and practically impunctate, in male sparsely punctate _____ rileyi (Ashmead)
- Postpetiole in female laterally sparsely but coarsely and distinctly punctate, in male densely so all over _____ patruelis Cushman

CHRYSOPOCTONUS BICOLOR, new species.

Distinct from all of the other North American species in its ferruginous head.

Female.—Length 4 mm.; antennae 3 mm.

Head anteriorly densely punctate, posteriorly sparsely so; temples weakly convex; postocellar line nearly twice ocell-ocular line; face twice as wide as long; malar space longer than basal width of mandible; cheeks strongly convex. Pronotum obscurely shagreened and punctate above, striate below; mesoscutum opaque shagreened, medially densely punctate, laterally sparsely so; mesopleurum polished, prepectus punctate; scutellum polished impunctate, lateral areas strongly striate; metapleurum and propodeum rugulosely roughened; abdomen polished throughout, postpetiole with a few faint punctures posteriorly.

Head, entire thorax, and antennae ferruginous, propodeum piceous stained; front and middle legs piceo-testaceous; hind legs darker, their coxae nearly black; wings hyaline, veins and stigma blackish, the latter whitish at base; abdomen black, second tergite with a transverse yellowish band at base, from which lines of the same color project obliquely toward the posterior lateral corners, all tergites very narrowly golden at apex.

Male.—Aside from the usual sexual differences in form, differs from female practically only in having the propodeum and metapleura more strongly rugose and black.

Host.—*Chrysopa lateralis* Guerin.

Type locality.—Little River, Florida.

Type.—Cat. No. 25914, U.S.N.M.

Described from two females and one male reared from host on avocado by G. F. Mozzette, and received from the Bureau of Entomology, United States Department of Agriculture.

The paratype female has the propodeum darker than in the type and the yellow-marking of second tergite better defined.

ARACHNOLETER, new genus.

Because of the short fourth joint of the maxillary palpi in comparison with the fifth joint, together with its agreement with the characters leading up to this point in the key, the genotype runs in Schmiedeknecht's Genera Insectorum key to *Hemitelini* to *Blapsidotes* Foerster, a genus without included species.

Head transverse; temples receding to the very strong and complete occipital carina; eyes and ocelli small, the malar space and ocell-ocular line long; face short; clypeus separated, strongly elevated in middle, with a narrow reflexed margin; mandible with a strong transverse ridge at base; antennae filiform, slightly thicker beyond middle, basal joints long, first longer than second. Thorax: notauli strong, extending two-thirds the length of mesoscutum; scutellum convex, without carinae; sternauli strong and complete; prepectal carina extending to subalar tubercle; propodeum completely areolated, apophyses not prominent; legs slender; calcaria short; areolet open, the second intercubitus weakly indicated, cubitus abruptly weak beyond areolet; radial cell short, hardly as long on metacarpus as stigma, radius originating far beyond middle of stigma; nervulus inclivous and lower abscissa of postnervulus reclivous, so that brachial cell is shorter on brachius than on discoideus; abscissula shorter than intercubitella; nervellus broken at or below middle. Abdomen: first segment narrow throughout, postpetiole parallel sided, dorsal carinae strong to apex, spiracles in middle; other segments together broadly ovate; ovipositor sheath shorter than first tergite.

The male differs from female only in being slightly more slender. Sheath of genitalia very large, abruptly narrowed near apex.

Type.—*Arachnoleter swezeyi*, new species.

ARACHNOLETER SWEZEYI, new species.

Female.—Length, 5 mm.; antennae, 4 mm.

Head shagreened, the temples subpolished; temples convex; cheeks buccate; face twice as long as broad; malar space as long as basal

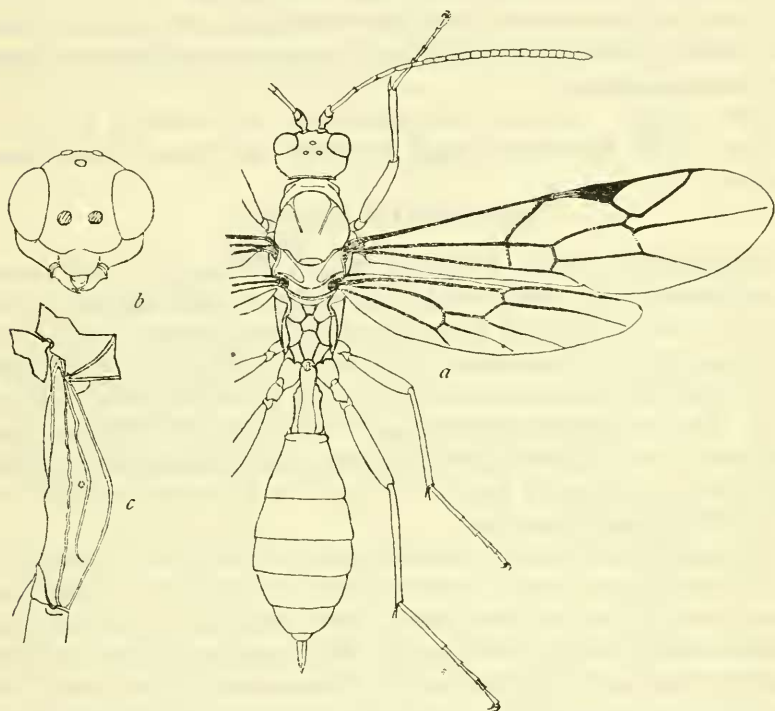


FIG. 1.—ARACHNOLETER SWEZEYI, NEW SPECIES: *a*, DORSAL VIEW SHOWING GENERAL FORM AND WING VENATION. *b*, HEAD, CEPHALIC VIEW. *c*, FIRST ABDOMINAL SEGMENT, LATERAL VIEW.

width of mandible; ocell-ocular line nearly twice the diameter of an ocellus, the postocellar line even longer; basal joint of flagellum five times as long as thick at apex. Thorax shagreened; notauli and sternauli foveolate; metapleurum and propodeum rugose, the propodeum less strongly so dorsally, areola hexagonal and broader behind than before. Abdomen shagreened; first tergite largely irregularly rugose; ovipositor sheath two-thirds as long as first tergite.

Head, thorax, and first and apical tergites black; tergites 2-5 ferruginous; flagellum brown, scape and pedicel testaceous; clypeus ferruginous; mandibles and palpi pale yellowish testaceous; legs testaceous, middle and hind tibiae and hind femur apically fuscous,

tarsal joints slightly darker at apex; wings hyaline, immaculate, venation brown, stigma basally and costa pale, tegulae testaceous.

Male.—Differs practically only sexually.

Host.—Spider eggs.

Type locality.—Oahu, Hawaii.

Type.—Cat. No. 25915, U.S.N.M.

Thirteen females and four males from various localities on Oahu and Kauai Islands reared by O. H. Swezey February to May and in November from the unidentified nests of a spider.

In size the species varies from that of the type down to 2.75 mm.; the smaller specimens also differing in having the red color of abdomen and legs paler.

Three female and one male paratypes are returned to O. H. Swezey, of the Hawaiian Sugar Planters' Association Experiment Station.

ANUROTROPUS, new genus.

The genotype runs in Foerster's key to his family Hemiteloidae to *Gynpetomorpha*, a genus without included species, and agrees with all of the few characters there assigned to the genus. But it possesses several very anomalous characters that Foerster would surely have employed had the species on which he based his genus possessed them. For this reason and because I believe that if Foerster's typeless genera are to be recognized the genotype should be selected from the European fauna, I prefer to give it a new name rather than assign it to *Gynpetomorpha*.

Antennae short, 15 to 16 jointed, scape not oblique at apex, pedicel cylindrical and nearly half as long as basal joint of flagellum, latter much thicker at apex than at base, especially in female; eyes small, broadly oval; malar space very long; ocelli very minute; temples broad and strongly convex. Thorax short, little longer than high; mesoscutum broader than long, notauli shallow but distinct and nearly complete; prepectus reaching only a short distance above front coxae, its bounding carina curving sharply forward and nearly reaching anterior margin of pleurum; sternauli deep and complete, arching apparently high up on the mesopleurum, the mesosternum swollen; propodeum very short, vertical from apex of areola, completely areolated except that costulae and apical abscissae of median carinae are obsolete or wanting, areola broadly transversely quadrangular, much wider at apex than at base, petiolar area comprising two-thirds the total length, spiracles small circular; legs long, femora stout, calcaria very short, hind tarsi tapering from base to apex; front wing incompletely veined, the second intercubitus and the postnervulus entirely lacking and the second recurrent indicated only by a very short stub on subdiscoideus and a hyaline line, radial cell very short,

areolet pentagonal in position, lower end of second recurrent much farther from base of wing than its upper end, subdiscoideus interstitial with first recurrent, second discoidal cell therefore pointed at base, nervulus postfurcal; hind wing with abscissula very short and forming a very widely obtuse angle with the intercubitus, apical abscissa of radiella wanting, nervellus slightly reclivous and curved, but not broken, the discoidella wanting, mediella wanting basally. Abdomen with first three tergites occupying practically the entire dorsal surface, each with a transverse furrow, those of the first two behind middle, deep and crenulate, that of the third shallow and smooth and before the middle; first nearly or quite as broad at apex as long, its sides divergent from base to apex, median carinae con-

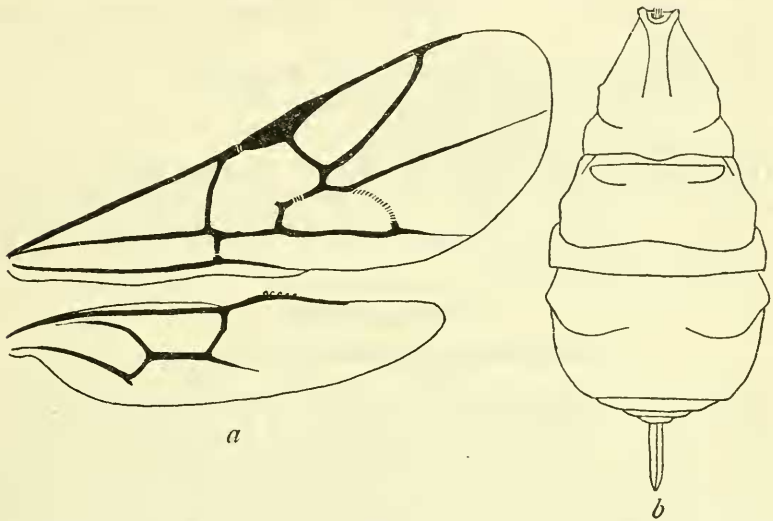


FIG. 2.—ANUROTROPUS MINUTUS, NEW SPECIES: *a*. WINGS. *b*. ABDOMEN OF FEMALE, DORSAL VIEW.

verging posteriorly and extending to transverse furrow; second tergite nearly as long as first, much broader at apex than long; third tergite slightly longer than second, its lateral and apical margins forming an almost continuous curve; ovipositor exerted, short.

Genotype.—*Anurotropus minutus*, new species.

ANUROTROPUS MINUTUS, new species.

Female.—Length 2.5 mm.; antennae 1.5 mm.

Head shining, weakly punctate, face more densely and strongly so; face nearly three times as wide as long medially; clypeus distinctly separated; malar space much longer than basal width of mandible; antennae 16-jointed, first joints of flagellum more than three times as long as thick at apex, others decreasing in length toward apex, the sub-apical ones little more than a third as long as first. Thorax shining,

sparsely punctate, polished and impunctate laterally, metapleurum subopaque; propodeum longitudinally rugulose between the transverse carinae, shining before and behind. First and second tergites very densely opaquely punctate basad of the transverse furrows, polished beyond, second with a transverse longitudinally striate impression just before the furrow; third tergite polished; ovipositor sheath two-thirds as long as first tergite.

Black; clypeus piceous; scape and pedicel, mandibles, palpi, tegulae, and legs (largely) stramineous to pale testaceous, the palpi palest and the hind legs with the most red, hind femur and tibia and all tarsi apically infusate; wings hyaline, venation, except costa, pale.

Male.—Smaller and more slender; antennae 15-jointed; otherwise like female.

Type locality.—Agricultural College, Michigan.

Allotype locality.—Algonquin, Illinois.

Type.—Cat. No. 25916, U.S.N.M.

One female (type) bearing the label "Ag. Coll. Mich., 234," and one male (allotype) labeled "5.10.96-151" and also the number 6714; also one female (paratype) taken at Madison, Connecticut, July 25, 1919, by W. E. Britton.

TRIBE CRYPTINI.

CRYPTOIDEUS BITUMINOSUS, new species.

In my key to North American species¹ runs directly to *luctuosus* (Provancher), from which it may at once be distinguished by the very indistinct sternauli not at all indicated posteriorly; first flagellar joint distinctly longer than second; immaculate wings; long and distinct notauli; propodeum coriaceous before and punctate behind basal carina. The propodeal spiracles are only slightly oval though distinctly not round as in *agrili* (Viereck); and the malar space is only slightly longer than the basal width of mandible.

From *agrili* it is at once distinguishable by its lack of antennal annulus and immaculate, pale infumate wings as well as by the structural character used in the key.

Female.—Length 8.5 mm.; antennae 6.5 mm.; ovipositor 2 mm.

Temples narrower than eyes, evenly convex; cheeks from in front weakly convex; malar space slightly longer than basal width of mandible; vertex, frons and face confluent punctate; inner orbits, malar space and temples shagreened, the last sparsely punctate; cheeks polished and sparsely punctate. Mesoscutum opaque shagreened, finely and densely punctate; scutellum polished, sparsely punctate; pleura and propodeum coarsely, confluent punctate, the

¹Proc. U. S. Nat. Mus., vol. 55, 1919, p. 536.

latter coriaceous before the basal carina; apical carina complete; areolet not convergent toward radius; discocubitus practically straight. First tergite subpolished, faintly shagreened, postpetiole laterally roughened and opaque; abdomen otherwise subopaque the earlier tergites strongly, closely punctate.

Coal black; wings dilutely infumate.

Host.—*Sphenophorus pertinax* Olivier.

Type locality.—Flushing, New York.

Type.—Cat. No. 25917, U.S.N.M.

One specimen reared April 30, 1920, from material collected October 13, 1919, by A. F. Satterthwaite.

CRYPTOIDEUS ANTHRACINUS, new species.

Because of its entirely black color and short malar space, runs in my key to species best to *agrili* (Viereck); but the spiracles are slightly oval, the temples slightly narrower than the eyes, the sternauli more distinct, the apical propodeal carina complete, and the ovipositor longer. It also differs in several of the following characters. From *bituminosus* it is at once distinguished by its fasciate wings and annulated antennae.

Female.—Length 12 mm.; antennae 8 mm.; ovipositor 5 mm.

Head coarsely and confluent punctate throughout, the sculpture becoming more or less rugulose on temples; temples slightly narrower than eyes; malar space distinctly shorter than basal width of mandible, granular; clypeus polished at apex, the apical tooth strong; cheeks buccate; basal joint of flagellum very slightly longer than second; apical joint cylindrical, truncate at apex. Thorax coarsely punctate, confluent so on sides of pronotum and on pleura, the punctures on mesoscutum, especially laterally, and on scutellum separated, the interspaces polished; notauli and sternauli distinct; propodeum basad of basal carina polished and sparsely punctate, apical of the carina coarsely reticulately rugose, apical carina strong on angles, weak and irregular medially; spiracles very broadly oval; discocubitus subangulate just basad of middle; intertubiti convergent above. Abdomen finely, opaquely shagreened; tergites 2-4 also densely punctate; petiole broadly flattened above, medially opaque, laterally polished, postpetiole medially at apex and base of second tergite, including gastrocoeli also polished; ovipositor sheath nearly as long as abdomen.

Black; posterior orbits and tibiae slightly reddish; flagellum with white annulus; wings hyaline with distinct stigmal and apical fasciae.

Host.—*Saperda obliqua* Say.

Type locality.—Lyme, Connecticut.

Type.—Cat. No. 25918, U.S.N.M.

One female reared by A. B. Champlain under Hopkins U. S. No. 11948.^a

HELCOSTIZUS ANNULICORNIS (Walsh).

Echthrus annulicornis WALSH, Trans. St. Louis Acad. Sci., vol. 3, 1873, p. 159.

This species appears to be a small, slender *Helcostizus* with two transverse carinae on the propodeum, though the wording regarding the latter character is somewhat obscure. Except for the size and the proportions of the flagellar joints and tergites the type of *Helcostizus bicarinatus* Cushman agrees very well.

SPILOCRYPTUS CIMBICIVORUS, new species.

Very closely related to its European congener of the same host-relations, *cimbicis* (Tschek), but the basal flagellar joints are relatively stouter and in the female the inner orbits immaculate. In the male also it differs in having the front and middle coxae entirely black, the face white only laterally, the malar space immaculate, the frontal orbits not at all or only narrowly white, the pronotum white at most only medially, and the subalar tubercle, scutellum and post-scutellum, and propodeum immaculate, and the white of the hind tarsi confined to joints 2-4.

In Provancher's key² to the species of *Cryptus* the female runs to *nuncius* Say and the male to *apicatus* Provancher. From *nuncius* the female differs in the relatively shorter basal flagellar joints, medially wanting apical carina of propodeum and stronger apophyses, the partly red fourth tergite, and the lack of white on the hind tarsi. From *apicatus* the male differs in its white inner orbits, clypeus, mandibles, palpi, and tegulae; stouter thorax; medially wanting apical carina; smooth and noncarinate first tergite with its spiracles far beyond the middle; entirely red tergites 2-4; white spotted seventh tergite and white annulate tibiae and tarsi.

Female.—Length, 7 mm.; antennae, 5 mm.; opipositor, 1.5 mm.

Head shagreened and sparsely punctate; temples strongly convex, receding, almost impunctate; cheeks polished below; frons medially finely, irregularly rugulose; face medially longitudinally elevated, with a shallow impression on each side just above clypeus; clypeus elevated medially and with a narrow reflexed margin; malar space about as long as basal width of mandible; eyes parallel; basal joints of flagellum elongate, first slightly longer than second. Thorax rather stout; pronotum longitudinally rugulose laterally behind the distinct epomia, mesoscutum polished, with fine separated punctures, notauli fine but distinct; scutellum like mesoscutum but more sparsely punctured; mesopleurum finely rugulose punctate, sternum punc-

² Add. Faune Ent. Can., 1889, p. 61.

tate, sternauli short but strong; metapleurum and propodeum irregularly rugulose, the latter polished and sparsely punctate before the weak basal carina; apical carina broadly incomplete medially, apophyses prominent, flange like; areolet large, sides slightly convergent; discocubitus sinuate but not broken; nervulus interstitial; nervellus broken far below middle, perpendicular. Abdomen finely shagreened; first tergite depressed, petiole flat above and polished, postpetiole very broad, spiracles at apical third; ovipositor sheath a half longer than first tergite.

Black, with middle of abdomen, including postpetiole and base of fourth tergite ferruginous, incomplete annulus occupying flagellar joints 5-9, radices of wings, and spot on seventh tergite white; flagellum otherwise fuscous with basal joints more reddish; front and middle coxae and all trochanters largely piceous, hind coxae red; hind femur at apex, hind tibia and tarsus fuscous, the tibia with a white basal annulus; legs otherwise testaceous to stramineous; wings faintly brownish hyaline, venation brown.

Male.—Has malar space shorter, apophyses weaker, and abdomen much more slender with postpetiole longer than wide, but structurally otherwise much like female; flagellum, except a white spot at extreme base above, black; anterior orbits, broadly below and narrowly above antennae, clypeus except margin, disk of mandible, palpi, anterior median margin of pronotum, tegulae largely, spot at apex of seventh tergite, base of hind tibia and middle three joints of hind tarsus white; all coxae and apical half of femur black.

Host.—*Cimex americana* Leach.

Type locality.—Brookings, South Dakota.

Type.—Cat. No. 25919, U.S.N.M.

Seven females and seven males reared May 17-26, 1891, at the South Dakota Experiment Station, and determined by G. C. Davis as *Cryptus extrematus* Cresson.

There is considerable variation in size in both directions from that of the type, the largest female being 9 and the smallest 5 mm. long. In the male the frontal orbits, the collar, and the seventh tergite are sometimes not at all white marked and the second joint of hind tarsus is largely black.

One pair of paratypes is returned to the South Dakota Experiment Station.

Subfamily ICHNEUMONINAE.

TRIBE ODONTOMERINI.

ODONTOMERUS STEJNEGERI, new species.

Female.—Length 9 mm.; ovipositor 6.5 mm.; antennae (flagella missing).

In Rohwer's key³ to North American species runs best to couplet 7, where it differs from *aethiops* Cresson in its short ovipositor and impunctate second and third tergites and from *atripes* Rohwer female in its black abdomen and short ovipositor. From *aethiops*, to which its black abdomen most closely allies it, it differs further in having the head wider behind the eyes and the temples not evenly convex as in *aethiops*, but much more strongly so posteriorly than immediately behind the eyes; also in having the front legs with a distinctly reddish tinge.

Mouth much wider than face; eyes strongly convergent below, small, twice as long as wide; face, cheeks, and lower temples coarsely and sparsely punctate, upper temples, vertex and frons polished and practically impunctate; ocellar triangle hardly broader than length of ocell-ocular line. Thorax polished, sparsely punctate, the punctures coarsest and densest in middle of mesoscutum and scutellum; propodeum completely areolated, but costellae and median carinae weak, hind angles dentate; hind femur stout, its thickness at apex of tooth about half its length. First tergite about twice as long as broad at apex, coriaceous, carinae obsolete; abdomen otherwise polished, unsculptured, second tergite about as long as broad at base; ovipositor as long as abdomen and half of thorax, the sheath broadened in its apical half.

Entirely black except that front and middle legs, palpi, and mandibles are more or less reddish; wings fusco-hyaline, venation black.

Type locality.—Robben Island, Okhotsk Sea.

Type.—Cat. No. 25920, U.S.N.M.

One female taken by Leonhard Stejneger on August 17, 1922.

TRIBE PHYTODIETINI.

PHYTODIETUS PULCHERRIMUS (Cresson).

This species differs from all of the other North American species with maculated propodeum in that the propodeum lacks all trace of a median longitudinal impression and the yellow spot instead of being divided or medially emarginate in front projects roundly toward the base; also the antennae are ferruginous with base and apex black, more contractingly so in the male.

The female has not been described. There is in the National Collection a female from Georgetown, District of Columbia, H. H. Smith, collector, that I take to be of this species. It runs in Rohwer's⁴ key to species to couplet 8, where in its uniformly ferruginous hind femora it agrees with *distinctus* Cresson, but it has a large precoxal white spot on mesopleurum and a smaller one at the

³ Proc. U. S. Nat. Mus., vol. 57, 1920, p. 455.

⁴ Idem, p. 461.

dorsal end of the prepectal carina, in addition to differing by the characters mentioned above.

From the male it differs in having the eyes larger and nearly parallel; the face and malar space narrower; the face medially black with a large yellow spot below each antenna; the thorax much less extensively yellow with the mesosternum entirely black; the metapleurum and sides of propodeum partly rufous; the legs generally darker testaceous, this color including the hind coxae, which lack the dorsal black stripe; and the antennae less distinctly bicolored, though distinctly paler before the apex and below.

Another female specimen from Montana which appears not to differ structurally has the basal three tergites rufous instead of black and the fourth partly so.

Phytodietus gracilicornis Cresson, from Mexico, is related in structure and color to *pulcherrimus*.

Subfamily OPHIONINAE.

TRIBE CAMPOPLEGINI.

HYPOSOTER RUBIGINOSUS, new species.

Remarkable chiefly because of its entirely ferruginous body, with only the head black. In color most like (*Limneria*) *Hyposoter rufa* (Ashmead), from which the male of the present species is at once distinguished by its black face and whitish clypeus.

Female.—Length 8 mm.; antennae 7 mm.

Head strongly transverse with temples and postvertex strongly sloping, opaque shagreened; face densely punctate and densely gray pubescent, slightly narrowing below; eyes slightly emarginate; clypeus broadly subtruncate and with a narrow reflexed margin; malar space half basal width of mandible; diameter of lateral ocellus shorter than postocellar line and longer than ocell-ocular line; flagellum rather stout, tapering toward apex. Thorax opaque shagreened throughout with more or less distinct punctuation on mesoscutum, pleura, and sternum; notauli obsolete, rugulose; propodeum nearly completely areolated, the costulae present and the areola and petiolar area separated; spiracles broadly oval; petiolar area transversely rugulose, propodeum otherwise granularly opaque; legs moderately stout; hind calcaria two-thirds as long as basitarsus, apical tarsal joint slightly longer than fourth, claws large and strongly pectinate; tibiae and tarsi spinose; stigma and radial cell narrow lanceolate, radius barely angulate; areolet petiolate, recurrent beyond middle; nervulus postfurcal; subdiscoideus slightly above middle of post-nervulus; lower outer angle of second discoidal cell acute; abscissula slightly longer than recurrentella; nervellus vertical, unbroken. Abdomen granularly opaque, stout, weakly compressed toward apex, the compression beginning beyond base of third segment; first tergite

slightly decurved, spiracle beyond apical third; postpetiole about three times as wide as petiole, a deep fovea on each side at junction of petiole and postpetiole; spiracles of second tergite slightly before middle, gastrocoeli slightly removed from base; ovipositor slightly exerted.

Ferruginous; head black with clypeus, mouthparts, and scape and pedicel largely yellowish; flagellum black, apex reddish; radices of wings and tegulae white; front coxae, front and middle trochanters, their tibiae outwardly and their tarsi stramineous; calcaria white; legs otherwise testaceous; sheath black.

Male.—In form and structure like female except in usual sexual differences. Front and middle legs entirely, and hind coxae beneath and their trochanters white.

Host.—*Olene basiflavus* Packard.

Type locality.—Stonington, Connecticut.

Allotype locality.—Rochester, Massachusetts.

Other locality.—Marion, Massachusetts.

Type.—Cat. No. 25921, U.S.N.M.

Described from three females and one male reared at the Gypsy Moth Laboratory, Melrose Highlands, Massachusetts, under Nos. 12209 (type and paratype *a*), 10067 *d* 4 (paratype *b*), and 10067 *c* 1 (allotype).

The cocoon of this species is very remarkable. The cocoon proper is spun inside the skin of the host exactly as in *Hyposoter fugitios* (Say), but on the ventral side and protruding through a slit in the skin of the host is a small cocoon-like structure with its anterior end open as though some smaller insect had emerged from it.

ECHTHRONOMAS OCHREOFRONS, new species.

Because of its rather elongately oval propodeal spiracle, rather weakly compressed abdomen, and long calcaria this species runs to *Echthronomas* in both Foerster's and Schmiedeknecht's keys, and agrees in structure perfectly with the latter's description of the genotype, *ochrostoma* Holmgren; but aside from the shape of the spiracle it does not seem to me to differ generically from species placed by American writers in *Hyposoter*, *Hypotherutes*, *Ischnoscopus*, and *Ameloctonus* and those assigned by European writers to *Anilastus*, all of which have been synonymized by Gahan⁵ under *Hyposoter*. Moreover, I doubt if the male, which I do not know, would differ even in the form of the spiracle from *Hyposoter*. In fact, I have before me a certainly congeneric, though not conspecific, male with even more elaborate yellow markings, that has the spiracles perfectly circular.

Female.—Length, 8 mm.; antennae, 8 mm.

⁵ Proc. U. S. Nat. Mus., vol. 48, 1914, p. 156.

Head antero-posteriorly very thin with the temples very strongly receding and postvertex nearly perpendicular from ocelli to occipital carina; face and frons finely granularly opaque with obscure punctures, the former slightly narrowing below, flattened, and clothed with rather long, white pubescence; clypeus broadly subtruncate at apex; labrum triangularly exerted, the apical angle notched, malar space barely a third as long as basal width of mandible; eyes rather strongly emarginate within; mandibles much longer than wide at base, where they are nearly twice as wide as at apex, upper tooth larger and slightly longer than lower; antennae rather stout, scape not obliquely truncate at apex; diameter of lateral ocellus a half longer than ocellular line and subequal to postocellar line. Thorax opaque, even the speculum shagreened, clothed with conspicuous white hair, mesoscutum, scutellum, lower mesopleura and sternum and metapleura also more or less punctate, mesoscutum most strongly so; lower angle of pronotum and upper portion of mesopleurum rugulose, punctiform fovea very deep and conspicuous; propodeum basally and laterally sculptured like metapleurum; medially slightly concave and transversely rugulose, basal carina and lateral portion of apical carina distinct, spiracle about twice as long as wide; legs, especially hind femur, rather stout, hind tibia and tarsus spiny, longer calcarium more than two-thirds as long as basitarsus, last two tarsal joints equal in length; stigma and radial cell narrow lanceolate, the radius hardly angulate, areolet petiolate with recurrent beyond middle, nervulus strongly postfurcal, subdiscoideus at about middle of postnervulus; abscissula and intercubitella subequal, nervellus reclivous unbroken. Abdomen compressed from base of third segment; first tergite with postpetiole about twice as wide as petiole, in side view slightly decurved, spiracles at apical two-fifths, petiole foveate laterally, postpetiole ridged but not distinctly carinate laterally; spiracles of second tergite at the middle, gastrocoeli nearly circular and shortly removed from base; ovipositor scarcely exerted.

Black, with abdomen largely ferruginous; face, cheeks, clypeus, mouth parts, frontal orbits except narrow interruption above antennae, scape and pedicel beneath, tegulae, humeral angle of pronotum, and a spot beneath hind wing yellow; flagellum black; front and middle legs stramineous with the femora and apices of the tibiae slightly testaceous; hind coxa black at base and above, ferruginous beneath, trochanter black at base, otherwise stramineous, femur ferruginous, tibia black with a broad whitish band between middle and base, reddish below toward apex, calcaria white, tarsus black; first tergite except apex and stains on apical tergite black.

Type locality.—Veitch, Virginia.

Type.—Cat. No. 25922, U.S.N.M.

One female taken by William Middleton.

TRIBE CREMASTINI.

Genus XIPHOSOMELLA Szepligeti.

Judging from the new species described below, this genus is, in several respects, intermediate between *Eiphosoma* Cresson and *Pristomerus* Curtis. The lateral edges of the first tergite, although touching along the ventral median line, are not completely fused as in *Eiphosoma*, but leave a distinct suture. The stigma is relatively broader than in *Eiphosoma* though narrower than in *Pristomerus*, and the radius originates at about its middle. The petiolar area is much longer than in *Eiphosoma*. The areola is usually open at the sides, though according to Szepligeti, it is closed in the genotype, *Xiphosomella brasiliensis* Szepligeti. The hind femur is stouter and not attenuate at the base as in *Eiphosoma*, and the tooth is before the apical fourth in the female and at about the apical third in the male. The abdomen is in form about intermediate between the two genera, being shorter and less strongly compressed than in *Eiphosoma* and broader and more strongly compressed than in *Pristomerus*.

In general form and in more minute structure it is perhaps somewhat more closely related to *Eiphosoma*.

XIPHOSOMELLA STENOMAE, new species.

Will run to neither of Szepligeti's three species in his key,⁶ agreeing with *brasiliensis* in the sculpture of the mesoscutum and with *boliviensis* and *cremastoides* in the incomplete areola and distinct though short intercubitus. From the only other described species, *tabascensis* Morley, it is immediately distinguishable in having the mesoscutum black not red.

Female.—Length 13 mm.; antennae 8 mm.; ovipositor 4 mm.

Head broad and very thin, temples very narrow, the occiput occupying nearly the entire posterior surface; frons, vertex, and temples opaque shagreened; frons with a longitudinal welt on each side next to the eyes; face polished, sparsely punctate, medially longitudinally elevated, nearly twice as wide as long; eyes nearly parallel within, the face very slightly wider than frons; clypeus about half as wide as face; distinctly separated, strongly convex, rounded at apex, with a narrow reflexed margin; malar space about half as long as basal width of mandible; mandibles nearly as broad at base as long with lower margin narrowly flangelike, upper tooth slightly longer and larger than lower. Thorax short; pronotum polished, deeply impressed laterally, epomia strong; mesoscutum polished with very sparse punctures anteriorly, notauli very deep but fading

⁶ Ann. Mus. Nat. Hung., vol. 4, 1906, p. 120.

out on the disk, a small longitudinally striate area between their posterior extremities; scutellum transverse, convex; polished; mesopleurum and sternum densely punctate, the former obliquely striate in upper anterior corner and in the oblique impression, polished along dorsal and posterior margins; sternauli distinctly impressed; metapleurum vertically striately shagreened with sparse punctures, propodeum completely areolated except that areola is open laterally; basal areas shagreened; middle area shagreened, laterally more or less punctate and medially transversely striate; apical areas transversely rugose; petiolar area as long as areola, rounded in front; intercubitus short but not entirely obliterated; abdomen nearly three times as long as head and thorax; second tergite slightly longer than first; epipleura of third tergite extending to spiracle; ovipositor sheath half as long as abdomen.

Tricolored; middle of face, frons, vertex, occiput, flagellum, mesoscutum, anterior margin of mesopleurum, the oblique impression in front, sternauli, part of lateral areas of scutellum, basal lateral areas and streaks in middle lateral areas, and a narrow median stripe extending the entire length of the abdomen except the petiole black; the head and thorax otherwise, except ferruginous stains on mesopleurum, sternum, propodeum, and the posterior orbits yellow, abdomen ferruginous, petiole stramineous; palpi, front and middle coxae and trochanters, apices of all femora and of hind coxae, hind tibia beneath at base and its calcaria stramineous; legs otherwise testaceous, except hind tibia and tarsus which are black; wings hyaline, venation black, front wings apically infumate.

Male.—Differs only sexually from female.

Type locality.—Ancon, Canal Zone, Panama.

Type.—Cat. No. 25923, U. S. N. M.

One pair reared August 8, 1921, from *Stenoma catinifer* Walsingham by J. Zetek, under his No. Z1532.

TRIBE PANISCINI.

PANISCUS RUGOSUS, new species.

Very distinct in its complete and very high propodeal carina.

Female.—Length 23 mm.; antennae 23 mm.

Temples nearly flat and sharply receding; occipital carina strong and complete though weak medially and approaching closely to ocelli; face longer than wide slightly convergent below, distinctly, sparsely punctate, the interspaces shagreened; clypeus sculptured like the face, long, narrowly truncate; frons narrower than face; ocelli very large, touching the eyes, postocellar line one-third as long as ocellar diameter; antennae rather stout, basal flagellar joint

nearly as long as next two combined, middle joints nearly twice as long as thick. Thorax granularly opaque; notauli distinct to beyond middle of mesocutum; scutellum margined to apex, the space between carinae about three-fourths as wide at apex as at base, with a median fovea; position of sternauli deeply and broadly concave; metapleurum posteriorly strongly and irregularly rugose; propodeum with apical carina very strong and high, the area in front with a few irregular rugae; areolet subelongate, the lower side nearly continuous with rest of cubitus, second intercubitus sharply broken; second recurrent strongly bent at upper third, otherwise nearly straight, interstitial; nervulus postfurcal by about half its length, nearly perpendicular; postnervulus broken at upper two-fifths; ramellus long; nervellus broken below upper third; legs stout, hind femur three-fourths as long as tibia, latter four-fifths as long as tarsus; tarsi very stout, very finely and densely pubescent beneath, fourth joint of middle tarsus about as broad as long, apical joint as long as or slightly longer than second, claws very large with about fourteen large teeth and several small basal ones. First tergite nearly four times as long as wide at apex; second two-thirds as wide at apex as long, two-thirds as long as first; sheath distinctly shorter than first tergite.

Rufo-testaceous; head more yellowish; vertex concolorous; flagellum black; wings hyaline, venation dark, stigma and costa pale testaceous; legs testaceous, tarsi paler.

Type locality.—Chejel, Guatemala.

Paratype locality.—Cordova, Vera Cruz, Mexico.

Type.—Cat. No. 25924, U. S. N. M.

Described from three females, the type and paratype *a* taken at the type locality in June by Schaus and Barnes and paratype *b* at the Mexican locality by Frederick Knab.

The paratypes exhibit only slight variations of color, size, and structure.